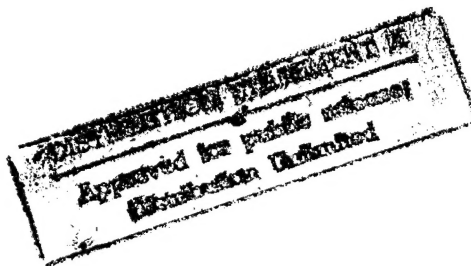


CBO MEMORANDUM

THE COSTS OF
THE ADMINISTRATION'S PLAN
FOR THE ARMY
THROUGH THE YEAR 2010

November 1994



19950710 007



DTIC QUALITY INSPECTED 5

CONGRESSIONAL BUDGET OFFICE
SECOND AND D STREETS, S.W.
WASHINGTON, D.C. 20515

THE COSTS OF
THE ADMINISTRATION'S PLAN
FOR THE ARMY
THROUGH THE YEAR 2010

November 1994

Accession For	
NTIS GRA&I	<input checked="checked" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By <i>perform 50</i>	
Distribution	
Availability Codes	
Dist	Avail and/or Special
<i>A-1</i>	

This memorandum on costs of the Administration's plan for the Army was prepared by the Congressional Budget Office (CBO) in response to a request from the Chairman of the House Committee on Armed Services. CBO prepared companion memorandums on budget requirements for the Navy and Air Force and an overview paper that discusses requirements for the entire Department of Defense.

Frances M. Lussier of CBO's National Security Division wrote this memorandum under the general supervision of Neil M. Singer and R. William Thomas. Raymond J. Hall of CBO's Budget Analysis Division provided detailed cost estimates. The author gratefully acknowledges the contributions of Shaun C. Black. Sherwood Kohn edited the manuscript, and Judith Cromwell prepared it for publication.

CONTENTS

SUMMARY	v
INTRODUCTION AND BACKGROUND	1
MILITARY PERSONNEL	1
OPERATION AND MAINTENANCE	3
PROCUREMENT	5
Estimating Costs of Major Programs	5
Estimating Total Procurement	10
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION; MILITARY CONSTRUCTION; AND FAMILY HOUSING	13
THE TOTAL ARMY BUDGET	14
Trends from 1994 Through 1999	14
Trends Beyond 1999	15
RESPONDING TO POTENTIAL BUDGETARY PRESSURES	17

TABLES

1.	Planned Army Military Personnel, 1994-1999	2
2.	Army Funding for Military Personnel, 1994-1999	3
3.	Army Funding for Operation and Maintenance, 1994-1999	4
4.	Army Funding for Procurement, by Account, 1994-1999	7
5.	Assumptions About the Structure of Three Army Procurement Programs	8
6.	Army Funding for Research, Development, Test, and Evaluation; Military Construction; and Family Housing, 1994-1999	14
7.	Total Army Funding, 1994-1999, Based on the Administration's Plan	15

FIGURES

S-1.	Total Army Costs, Planned and Estimated, 1995-2010	vii
1.	Army Funding for Procurement, 1974-1994	6
2.	Costs of Major Army Programs, 1995-2010	9
3.	Total Army Procurement, Planned and Estimated, 1995-2010	12
4.	Total Army Costs, Planned and Estimated, 1995-2010	16

SUMMARY

The Army's budget rose sharply during the 1980-1985 period, from \$66 billion to \$100 billion, then fell almost as precipitously back to \$62 billion for the 1994 fiscal year. (All costs in this memorandum are expressed in 1995 dollars.) The Administration has submitted a detailed plan for the next five years that calls for a further decrease in the Army's budget to \$53 billion by the year 1999. This shrinking is commensurate with a proposed reduction in the number of military personnel and major combat units during the same period.

The Congressional Budget Office's (CBO's) analysis shows that if the Army is to carry out its plans for modernization programs, its budget must grow in the years beyond 1999, even if the Army itself does not increase in size. The average annual increase in the budget would need to be on the order of 2 percent during the 1999-2007 period. The Army's budget requirements would remain roughly constant or decrease between 2007 and 2010, depending on CBO's assumptions about the costs of Army acquisition programs.

The need for budget increases is driven largely by the Army's plans to produce a new reconnaissance/attack helicopter, known as the RAH-66 Comanche. This program is scheduled to go into production in the late 1990s or the early part of the next decade. During the later part of the next decade, the program could require annual funding of more than \$2 billion. Unanticipated cost growth could push the funding requirements of the Comanche program up even further.

CBO's estimates of the annual costs of the Army's long-term plans are based, wherever possible, on Department of Defense and Army statements and the Administration's plan for 1995 through 1999. CBO assumes that the Army will remain at the size planned for 1999--determined by the Bottom-Up Review--through 2010, an assumption consistent with statements by the Army's Chief of Staff. CBO further assumes that the planned forces can be supported with the funds included in the Administration's plan, and that those forces would be modernized with weapons that the Army plans to develop and acquire in the next 15 years. Changes in the Administration's plans would obviously change CBO's estimates.

CBO generated two estimates of the costs that the Army might incur through the year 2010. The range of estimated costs of the Army's plan primarily reflects differing assumptions about the cost of weapons that the Army plans to purchase in the future. The lower estimate is based on the assumption that policies are adopted to hold down these costs, and that the unit cost of weapons will remain at levels currently estimated by the Army, even though some of the weapons have yet to be designed. The lower

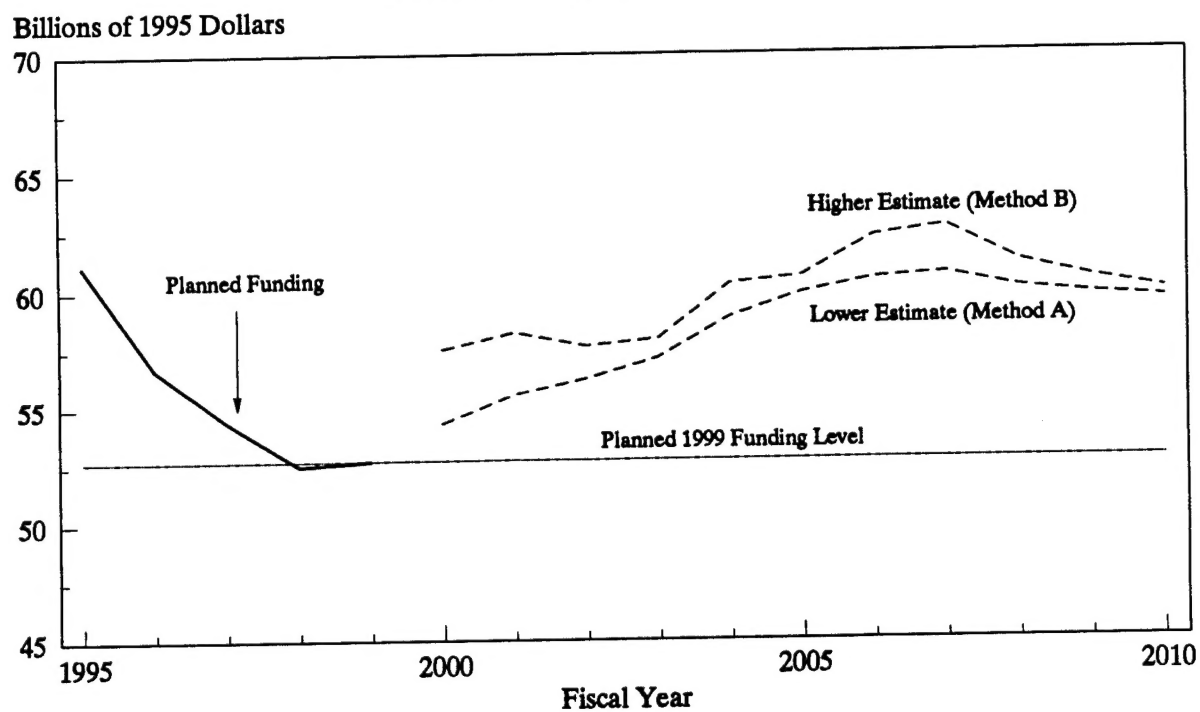
estimate is also based on the assumption that costs for research, development, test, and evaluation and all nonmajor procurement will return to historically average levels, adjusted for the smaller size of the Army. Under these assumptions, the costs of the Administration's current plans for the Army would rise from \$53 billion in 1999 to almost \$61 billion in 2007--an average growth of slightly less than 2 percent a year--and then would decline slowly to just under \$60 billion by 2010. Army budgets at these levels would be about \$7 billion to \$8 billion above those planned by the Administration for 1999 (see Summary Figure).

The higher estimate of costs reflects past experience with acquisition programs. It assumes that:

- o Weapons that have recently entered production or will do so in the next six years will cost 25 percent more than planned;
- o Costs for weapons that are far from production will grow by 50 percent;
- o The costs of procurement programs that purchase things other than major weapons, such as radios and trucks, will rise and fall with those of major programs; and
- o The costs of research and development are directly related to the cost of other Army functions.

The relationships among these portions of the Army budget were based on spending patterns for the 1974-1994 period. Based on these assumptions, the annual cost of the Army's plan would grow from the planned level of \$53 billion in 1999 to \$63 billion by 2007, requiring average real increases of slightly more than 2 percent a year. After 2007, funding requirements would fall to about \$60 billion by 2010. Such funding levels would significantly exceed the \$53 billion planned for 1999.

SUMMARY FIGURE. TOTAL ARMY COSTS, PLANNED AND ESTIMATED, 1995-2010



SOURCE: Congressional Budget Office based on Department of Defense data.

INTRODUCTION AND BACKGROUND

The Army is in transition. It must adapt to a new world situation in which its primary opponent is no longer as formidable or as certain as it seemed to be for the greater part of the past 40 years. The event for which the U.S. Army equipped and trained itself for decades--a surprise attack by forces of the Warsaw Pact on Western Europe--is no longer possible. Furthermore, under the Administration's plan, both the size of the Army and the funds available to it will diminish in real terms, at least through 1998. The Army plans to reduce the number of its active divisions by about 17 percent by the end of fiscal year 1997 and to keep it at that level through 1999.

But what will happen beyond 1999? CBO has estimated the costs of the Army's plans through the year 2010, a period long enough to reflect the budgetary effects of the Army's programs to develop and buy new weapons, but not so long that details about the nature of these weapons do not exist. CBO has also estimated what could happen to the Army's budget through 2010 if the Administration carries out its publicly announced plans. Detailed fiscal plans are available through 1999, the last year in the Future Years Defense Program submitted in February 1994. Detailed plans for forces are also available publicly through 1999. CBO assumes that the Army will remain at its planned 1999 size through 2010. This assumption is consistent with a statement by Secretary of the Army Togo West that the military forces planned for 1999 represent the smallest forces that he or the Army Chief of Staff could support.

CBO's analysis of the way in which Army costs are expected to change during the next five years is based on detailed plans submitted by the Administration to the Congress. For the 11 years following 1999, CBO's analysis is based on the assumption that the Army will carry out its announced plans to equip its forces with a variety of new and more capable weapons, including a new helicopter. For categories of spending for which the Army has not announced detailed plans, the analysis is based on two sets of assumptions that rely on historical precedents and are designed to take into account the likely range of costs that the Army would incur in each of its major budget appropriations.

MILITARY PERSONNEL

The appropriation for military personnel contains funds for the pay and allowances of all active-duty and reserve personnel, in addition to money for travel and some other, smaller categories. The Army's costs for military personnel are determined primarily by the number of people in the service. Between 1994 and 1997, the Army plans to reduce the number of active-duty personnel by 8 percent and to make no further reductions between 1997 and

TABLE 1. PLANNED ARMY MILITARY PERSONNEL, 1994-1999
(End strengths in thousands)

Component	1994	1995	1996	1997	1998	1999
Active	540	510	500	495	495	495
Guard	410	400	386	377	368	367
Reserve	260	242	230	225	220	208

SOURCE: Congressional Budget Office based on Department of Defense data.

1999 (see Table 1). The number of Army National Guard and Reserve personnel will shrink proportionately more from 1994 to 1999--by 10 percent and 20 percent, respectively. These larger reductions in the Army's reserve component may be due, in part, to the fact that reductions in active personnel from 1990 to 1994 were proportionately higher, at 28 percent, than they were for the Army National Guard or Reserve--6 percent and 13 percent, respectively, for the same period.

Because the number of people on active and reserve duty will be reduced, so will the need for funds to pay them. Indeed, the Administration's planned budget for the military personnel appropriation reflects a substantial decrease--15 percent--in funds for all Army military personnel during the 1994-1997 period (see Table 2). The military personnel budget would remain relatively constant for the rest of the six-year period, reflecting a halt in the decline in the number of people on active duty.¹

CBO assumes that costs for Army personnel would remain constant between 1999 and 2010 in real terms at the planned level for 1999 of \$23 billion a year. This assumption is consistent with the premise that the size of the Army will remain constant during those years. Small changes in the composition of military personnel--for example, shifts in seniority or changes in number of personnel entering and leaving the military--would affect future spending in the military personnel appropriation. But these effects are not likely to be large or to alter the overall results in this analysis.

1. Funding levels may need to be higher than those in the Administration's plans in order to accommodate a Congressionally mandated pay raise that is higher than that requested by the Administration.

OPERATION AND MAINTENANCE

The Army's operation and maintenance (O&M) appropriation pays for most day-to-day operating costs except military pay. Funds in the O&M appropriation pay for the operation and maintenance of equipment, costs of utilities at bases, some training costs, expenses for some spare parts, and repair of real property. The size of this appropriation depends somewhat on the number of weapons and supporting pieces of equipment that the Army operates and must maintain, which in turn is a function of the number of combat and support units within the service.

The number of Army combat and support units will decline slightly in coming years. Specifically, between now and 1997 the active Army will shrink by 17 percent, from 12 divisions to 10 divisions. The percentage of reduction in the total number of combat brigades will be somewhat smaller, however, because five of the Army's active divisions that currently have only two active brigades will add an additional active brigade. (An Army division typically includes three brigades, each of which contains between 3,000 and 5,000 personnel plus associated equipment.) The active Army, which currently includes 12 divisions with 31 active brigades, will reorganize by 1997 into 10 divisions with 30 active brigades. The reserve component, which now includes

TABLE 2. ARMY FUNDING FOR MILITARY PERSONNEL, 1994-1999
(In billions of 1995 dollars)

Component	1994	1995	1996	1997	1998	1999
Active	22	21	19	18	18	18
Guard	3	3	3	3	3	3
Reserve	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
Total	27	26	24	23	23	23

SOURCE: Congressional Budget Office based on Department of Defense, *Future Years Defense Program* (February 1994).

NOTE: Does not include additional funding required to support a Congressionally authorized pay raise for fiscal year 1995 that is higher than that requested by the Administration.

eight divisions, will retain the same number of divisions but will reduce its total number of brigades from 45 in 1994 to 37 in 1999.

The Administration's proposed funding for the O&M appropriation reflects these slight reductions in forces. The total Army funding for O&M is scheduled to fall from \$20 billion to \$18 billion between 1994 and 1999 (see Table 3). Operation and maintenance funding for the active Army will fall by only 12 percent, an amount that is somewhat less than proportional to the reduction in the number of active divisions. The Administration's proposed levels of O&M funding remain essentially constant for the reserve component even though it is slated to lose eight of its 45 brigades.

CBO's estimates of total Army costs are based on the assumption that the Army's O&M costs will remain constant at \$18 billion a year between 1999 and 2010. That assumption is consistent with the premises that the Army's forces will not change after 1999 and that the costs to operate and maintain those forces will remain constant. Unlike costs associated with military personnel, however, it is likely that O&M costs could deviate from this estimate, for several reasons. Fielding of new weapons may affect future O&M costs, although the direction of change is not clear. Most new weapons are designed to hold down operating and maintenance costs. In some cases, however, newer and more technically sophisticated weapons can raise these costs. If the Army cannot divest itself of unneeded bases, it will face unanticipated O&M costs to keep them open. Finally, the Army could incur

TABLE 3. ARMY FUNDING FOR OPERATION AND MAINTENANCE, 1994-1999
(In billions of 1995 dollars)

Component	1994	1995	1996	1997	1998	1999
Active	17	18	16	15	15	15
Guard	2	2	2	2	2	2
Reserve	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Total ^a	20	22	19	19	18	18

SOURCE: Congressional Budget Office based on Department of Defense, *Future Years Defense Program* (February 1994).

a. Because numbers are rounded, their sums may not correspond to the totals shown.

growing costs as it seeks to remedy some of the environmental problems that exist at its bases.

PROCUREMENT

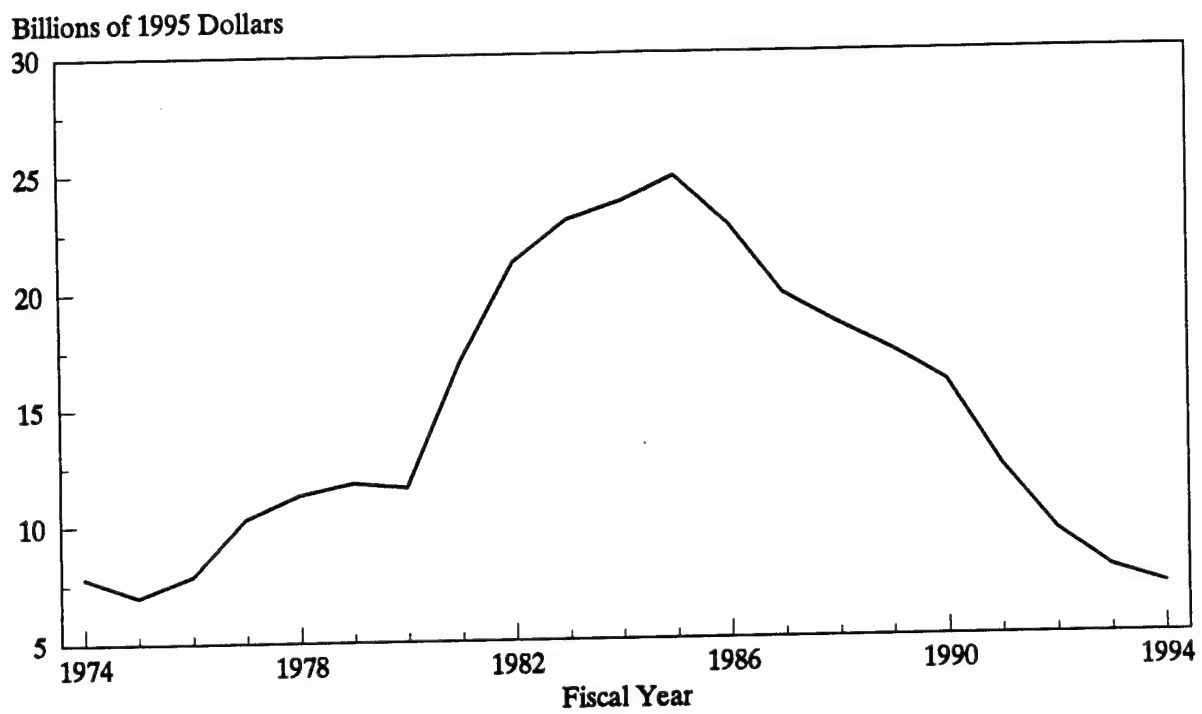
The Army's procurement appropriation includes funds to buy new weapons, ammunition, and equipment such as radios, trucks, generators, and other support items. The rate at which the Army spends money on new equipment is not necessarily tied to the number of military units in the service. Indeed, between 1977 and 1985, when the size of the active Army remained relatively constant at 780,000 military personnel and 16 or 17 divisions, the real level of funds for procurement increased by more than a factor of two and one-half, from \$10 billion to \$25 billion (see Figure 1). The large increase was the direct result of a need not for more equipment, but for more sophisticated and, hence, more expensive equipment. During that period, the Army bought a new generation of more sophisticated tanks, combat helicopters, and missiles designed to defeat more capable Soviet systems. Since 1985, Army funds to buy or modify equipment have shrunk annually in real terms so that, in 1990, Army procurement totaled only \$16 billion. As with the buildup from 1980 to 1985, this reduction in funds for procurement in the later 1980s was not tied closely to changes in the size of the Army. Since 1990, the Army has become significantly smaller, however, and annual funding for procurement has decreased even further, to \$7 billion in 1994.

The Army expects a continued decline in procurement funding through 1997. During the next several years, annual spending will be about \$6 billion or \$7 billion (see Table 4). The expected completion of several major modernization programs explains part of this sharp decline. Specifically, by the end of 1991, the Army completed the bulk of its purchases of new-production Abrams tanks, Bradley fighting vehicles, and Apache helicopters. Newer weapons that will eventually replace some of the Army's older systems, such as the AH-1 helicopter and the M109 self-propelled howitzer, are not expected to enter production before 1999, the last year for which detailed procurement plans are available.

Estimating Costs of Major Programs

It would clearly not be reasonable to estimate procurement costs beyond 1999 on the sole basis of the size of the Army. Some funding requirements, however, specifically those for major weapons, can be estimated on the basis of the Administration's stated plans, which include one major new weapons program that will continue into the next century. That program will develop

FIGURE 1. ARMY FUNDING FOR PROCUREMENT, 1974-1994



SOURCE: Congressional Budget Office based on Department of Defense data.

and procure a new helicopter for reconnaissance and attack missions--the RAH-66 Comanche (formerly the LHX)--that will replace several 1960s-vintage helicopters that are in use today.

Army plans for annual spending on the Comanche helicopter program through 2010 are not available to the public. However, some information is available about the total number of helicopters to be procured, total amount to be spent, and annual production rates. By combining the available pieces of data, CBO was able to estimate annual spending for the Comanche program. CBO's estimate is consistent with the Army's currently stated acquisition objectives. Some of the details underlying this estimate, including the average number of helicopters that CBO expects the Army to purchase, and the average unit costs of the helicopters, are shown in Table 5.

If carried out as currently planned, the Comanche program would represent a substantial investment by the Army. It alone could require \$14 billion in procurement funds through 2010. Indeed, annual spending could exceed \$2 billion in 2007, an amount that represents one-third of the total procurement funding that the Army has requested for 1995.

TABLE 4. ARMY FUNDING FOR PROCUREMENT, BY ACCOUNT, 1994-1999
(In billions of 1995 dollars)

Account	1994	1995	1996	1997	1998	1999
Aircraft Procurement	1.4	1.0	1.1	0.8	0.7	1.0
Missile Procurement	1.1	0.6	0.6	0.7	0.9	1.0
Weapons and Tracked Combat Vehicles	0.9	0.9	1.4	1.3	1.4	1.5
Ammunition	0.8	0.8	0.7	0.6	0.6	0.6
Other Procurement	<u>3.0</u>	<u>2.7</u>	<u>2.8</u>	<u>2.5</u>	<u>2.2</u>	<u>2.1</u>
Total ^a	7.1	6.1	6.7	5.9	5.9	6.3

SOURCE: Congressional Budget Office based on Department of Defense, *Future Years Defense Program* (February 1994).

a. Because numbers are rounded, their sums may not correspond to the totals shown.

The Army has outlined needs for funds for several other major programs over the next two decades, although none is as large as the Comanche helicopter program. These other programs include: improvements to the Army's helicopters, tanks, and fighting vehicles; a new artillery piece and support vehicle; a new antitank weapon (known as Javelin); and a new radar-guided missile for the Apache attack helicopter (called Longbow). Taken together, these smaller programs add more than \$2 billion to the procurement costs that would be incurred in 2004.

The cost of purchasing a new generation of attack helicopters and 10 other systems could be \$3 billion to \$5 billion annually in the years between 2000 and 2010, if current Army projections turn out to be accurate (see Figure 2). Costs could be pushed higher, however, if the price of planned new systems exceeds current estimates.

The programs to develop a new howitzer (AFAS) and its support vehicle (FARV-A) are just beginning. Designs for the vehicles do not yet exist. Past patterns suggest that the costs of these vehicles will be higher when they actually roll off the production line than the costs that the Army has projected. Therefore, when attempting to anticipate circumstances that could lead to higher costs for the Army's procurement plans for the next 20 years, it is prudent to adjust estimates to reflect the potential for cost growth.

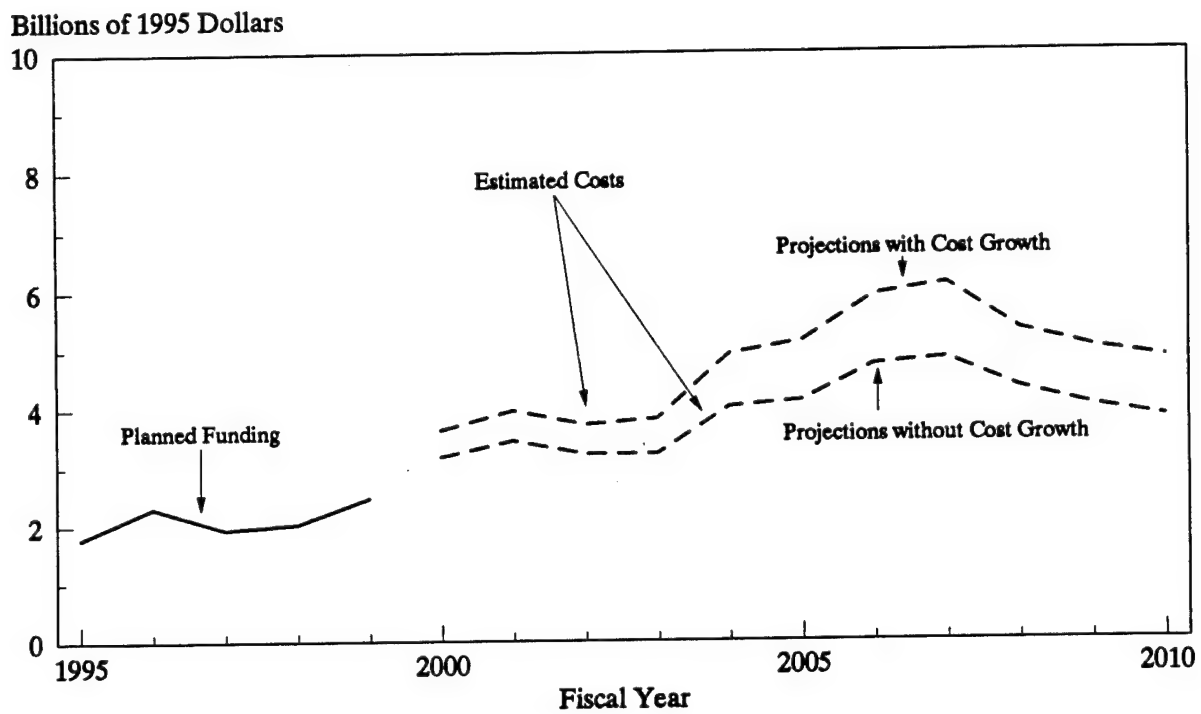
TABLE 5. ASSUMPTIONS ABOUT THE STRUCTURE OF THREE ARMY PROCUREMENT PROGRAMS

Program	Years of Purchase	Maximum Annual Rate of Production	Average Unit Cost (Millions of 1995 dollars)	Total Quantity, 2000-2010	Total Procurement Funds, 2000-2010 (Billions of 1995 dollars)
Comanche Helicopter	1999-2010	120	19	729	14
AFAS	2002-2010	100	7	565	4
FARV-A	2002-2010	100	1	565	1

SOURCE: Congressional Budget Office based on Department of the Army data.

NOTE: AFAS = advanced field artillery system; FARV-A = future armored resupply vehicle, ammunition.

FIGURE 2. COSTS OF MAJOR ARMY PROGRAMS, 1995-2010



SOURCE: Congressional Budget Office based on Department of Defense data.

Significant cost growth has been common in defense weapons programs. Because the AFAS and FARV-A programs are far from production, CBO assumed an increase of 50 percent. CBO assumed a cost growth of 25 percent for programs that have recently entered production or will do so during the next six years.² These include the Comanche helicopter program, the Longbow radar missile program, the SADARM version of the MLRS rocket, the Javelin missile, and an armored gun program.

Increasing unit costs could add between \$0.4 billion and \$1.3 billion each year between 2000 and 2010 to the costs of major programs. As a result, the total annual procurement cost of the major programs could reach \$6 billion in the year 2006.

Estimating Total Procurement

Army procurement funds pay for many items other than the small number of major programs discussed above. For example, the President's budget for fiscal year 1995 listed 39 items in the Aircraft Procurement account alone. The Other Procurement account, which consisted of 176 line items in the fiscal year 1995 budget, includes funds to buy such support equipment as trucks and radios. Indeed, for fiscal year 1999, funding for major Army programs accounts for about \$2.5 billion out of the total \$6.3 billion in procurement funds--or 39 percent--included in the Administration's plan for the Army. Clearly, any estimates of the costs of Army procurement through 2010 must take into account the need to provide funds for the hundreds of smaller, or nonmajor, programs. Unfortunately, CBO does not have detailed data to use in estimating the costs of these programs in the years beyond 1999. To allow for the uncertainty about future costs of nonmajor programs and the accuracy of current estimates of the costs of major weapons programs, CBO made two estimates of total procurement costs.

Estimate Based on Method A. The first estimate of procurement costs outlined in this memorandum is based, in part, on the assumption that costs for these nonmajor programs will return to their historical level, based on the average from 1974 to 1991, after taking into account the smaller size of the future Army. In addition, it assumes that new weapons cost no more than the

2. These rates of cost growth fall within the historical range. See Karen W. Tyson and others, "Cost and Schedule Growth in Major Acquisition Programs: An Empirical Analysis," *Proceedings of the 1989 Acquisition Research Symposium* (Washington, D.C.: Defense Systems Management College and the Washington, D.C., Chapter of the National Contract Management Association, 1989), p.125; and Gary Bliss, "The Accuracy of Weapons Systems Cost Estimates" (paper presented at the 59th Military Operations Research Symposium, West Point, New York, June 12, 1991).

Army's current estimates; that is, there is no unanticipated cost growth.³ Thus, this estimate rests on the assumption that policies would be adopted to hold down the future cost of weapons by avoiding unplanned cost growth and by restricting spending for nonmajor programs.

Procurement costs estimated using these assumptions--designated as method A--would rise from \$6 billion in 1999 to almost \$12 billion in 2007, and then fall to around \$11 billion a year by 2010 (see Figure 3). Annual procurement costs based on method A would be less, in real terms, than the annual procurement funding provided to the Army from 1981 to 1991.

Estimate Based on Method B. CBO's second estimate of procurement costs is based on the assumption that the cost of nonmajor procurement is primarily related to the costs of procuring major weapons. In this way, as costs of the "big ticket" items rise, the costs of the numerous supporting items also increase. Such a relationship between costs of nonmajor and major procurement programs would be consistent with the way the Army has distributed its procurement funds in the past. There may also be a programmatic explanation for increases in the cost of nonmajor items as costs of major items rise; that is, the unit costs of new nonmajor systems that would support and complement the Army's new sophisticated weapons could rise sharply over the cost of the current generation of systems. This increase might be especially likely for those missiles, radios, and radars that CBO defines as nonmajor programs for this analysis. Furthermore, maintaining high levels of readiness in the Army might also result in increasing costs for ammunition, spare parts, material-handling equipment, and trucks that this analysis also defines as nonmajor items.

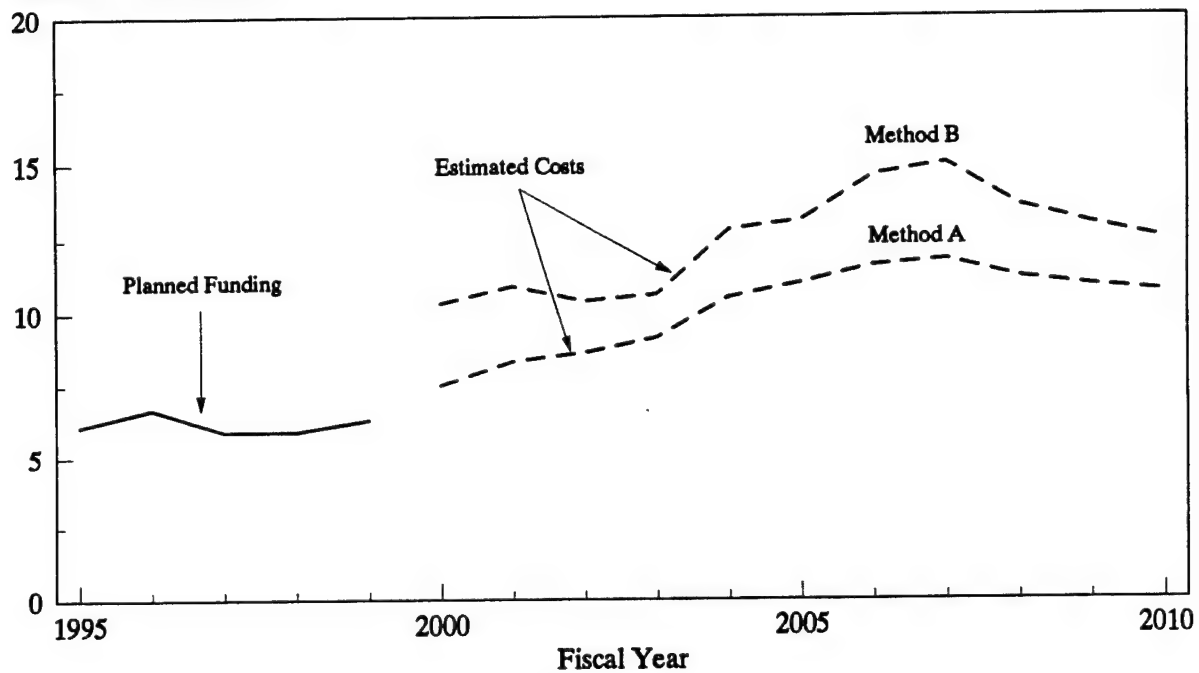
Whatever the reason, the costs of nonmajor procurement, and therefore total procurement, have kept pace with the costs of major procurement during the past 20 years. Based on procurement data from 1974 through 1994, there is a statistically significant relationship between the costs of the Army's major programs and total procurement.⁴ Consequently, CBO estimates that the cost of nonmajor procurement would rise from less than \$4 billion in 1999 to \$9 billion in 2007. These cost increases may be necessary to maintain high levels of readiness for war, particularly if more sophisticated major weapons are to

3. Nonmajor procurement costs are assumed to grow from their 1999 level, which is below the historical average, to the average level by 2005. CBO assumes that nonmajor program costs will remain at the average level from 2005 to 2010.

4. Specifically, CBO's analysis shows that the cost of nonmajor programs in a given year equals 0.9 times the cost of major programs plus \$3.3 billion.

FIGURE 3. TOTAL ARMY PROCUREMENT, PLANNED AND ESTIMATED, 1995-2010

Billions of 1995 Dollars



SOURCE: Congressional Budget Office based on Department of Defense data.

be maintained and tested. Indeed, the funding designated for purchase of nonmajor items in the Administration's plan for 1999 represents a level for that category that is below the level spent in any year between 1974 and 1994.

In addition to increased costs of nonmajor programs, this second estimate is also based on the assumption that the cost of major programs will grow. When combined with the estimate of the cost of nonmajor programs using the statistical linear relationship, total Army procurement costs would increase to about \$15 billion in 2007 (see Figure 3) and then fall to about \$13 billion by 2010. At these levels, Army procurement costs would be similar to those during the early 1990s.

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION; MILITARY CONSTRUCTION; AND FAMILY HOUSING

Through 1999, the Administration's plan would provide approximately constant funding for two of the three remaining Army appropriations--military construction and family housing--and declining funding for research, development, test, and evaluation (RDT&E). Of these three, RDT&E represents the largest cost and involves the most uncertainty (see Table 6). For the years beyond 1999, for which the Army has not published any specific plans, CBO projected costs for RDT&E using two different methods. One estimate--part of method A--assumes that costs would return to average historical levels based on the funding from 1974 through 1994. As with costs for nonmajor procurement, costs for RDT&E are assumed to rise from their planned 1999 level to the historical average in 2005 and remain at that level through 2010. Thus, by 2005, RDT&E costs would increase to almost \$6 billion annually and would remain at that level through 2010.

Another approach to estimating costs in this area--part of method B--is based on the historical share of the Army's budget allotted to RDT&E. Between 1974 and 1994, funds for RDT&E averaged 7 percent of the total Army budget. If costs for RDT&E are estimated beyond 1999, based on maintaining a constant share of total Army costs, they will rise and fall as do combined costs for operation and maintenance, military personnel, procurement, military construction, and family housing. Specifically, if method B is used to estimate future procurement costs, costs for RDT&E would increase from \$3 billion in 1999 to almost \$4.5 billion in 2007 and remain at approximately this level through 2010.

CBO made only one estimate of future costs for family housing and military construction. Costs of family housing are assumed to be related to the number of active-duty personnel and so would remain constant at \$1.3

billion through 2010 at the 1999 level planned by the Administration. CBO also assumes that costs for military construction will remain constant at the 1999 level--equal to \$1.1 billion--planned by the Administration.

THE TOTAL ARMY BUDGET

When the estimated costs for the various parts of the Army budget are added up, the total suggests trends in the overall cost of the Army for 1999 through 2010 that would differ sharply from those for the 1994-1999 period.

Trends from 1994 Through 1999

The Administration's plan calls for an average real decline of 3 percent a year in the size of the total Army budget between 1994 and 1999 (see Table 7). Over the six years, the Army budget would decline by more than 14 percent in real terms. The drop largely reflects the reductions in Army personnel and force structure that are expected to take place during this period. The relatively constant procurement spending at previously low levels is explained by the completion of several major Army programs, such as the Abrams tank and the Apache helicopter, in the early 1990s and the absence of large new programs that would enter production before 1999.

TABLE 6. ARMY FUNDING FOR RESEARCH, DEVELOPMENT, TEST, AND EVALUATION; MILITARY CONSTRUCTION; AND FAMILY HOUSING, 1994-1999 (In billions of 1995 dollars)

Appropriation	1994	1995	1996	1997	1998	1999
Research, Development, Test, and Evaluation	6	5	4	4	4	3
Military Construction	1	1	1	1	1	1
Family Housing	1	1	1	1	1	1

SOURCE: Congressional Budget Office based on Department of Defense, *Future Years Defense Program* (February 1994).

Trends Beyond 1999

Beyond 1999, total Army costs seem likely to grow if the Army carries out its apparent plan to hold forces constant at planned 1999 levels and to modernize them with weapons that are now on the drawing boards. The amount of growth, however, would differ considerably under CBO's two estimates.

Estimate Based on Method A. Based on the assumption that the Army would adopt policies that avoid unplanned growth in the cost of major weapons and hold down other costs, CBO estimates that total annual costs to the Army through 2010 would exceed the planned level of real funding for 1999 by almost \$8 billion at the peak in 2007 (see Figure 4). Annual costs would rise to almost \$61 billion by 2007 and then remain relatively constant through 2010.

Army budgets based on this estimate resulting from method A would reflect, to some extent, the substantial reduction in world tensions and the resulting reduction in the size of the Army. Even at its peak in 2007, the Army's budget, based on this estimate, would be smaller than any Army budget since 1975 and would be similar to the budget proposed for 1995.

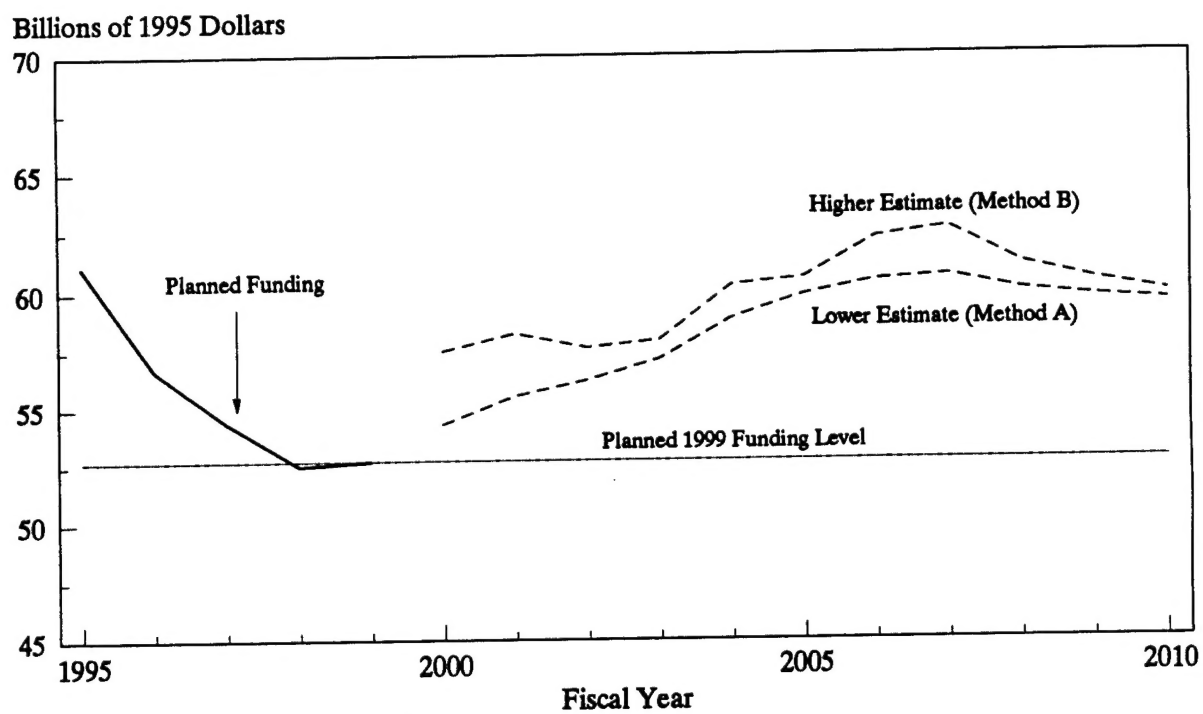
TABLE 7. TOTAL ARMY FUNDING, 1994-1999, BASED ON THE
ADMINISTRATION'S PLAN (In billions of 1995 dollars)

Appropriation	1994	1995	1996	1997	1998	1999
Military Personnel	27	26	24	23	23	23
Operation and Maintenance	20	22	19	19	18	18
Procurement	7	6	7	6	6	6
Research, Development, Test, and Evaluation	6	5	4	4	4	3
Military Construction	1	1	1	1	1	1
Family Housing	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Total ^a	62	61	57	54	53	53

SOURCE: Congressional Budget Office based on Department of Defense, *Future Years Defense Program* (February 1994).

a. Because numbers are rounded, their sums may not correspond to the totals shown.

FIGURE 4. TOTAL ARMY COSTS, PLANNED AND ESTIMATED, 1995-2010



SOURCE: Congressional Budget Office based on Department of Defense data.

Estimate Based on Method B. CBO's estimate of costs based on the assumptions of method B is more consistent with budgetary experience. It suggests a very different level of spending than does the first estimate of the costs associated with the Administration's plan. Using method B, Army costs would grow by an average of slightly more than 2 percent annually from 1999 through 2007, to a level of almost \$63 billion. This level of spending reflects hefty sums for procurement, primarily for the Army's ambitious Comanche helicopter program. After 2007, costs would decline to about \$60 billion by 2010. Thus, growth between 1999 and 2010 would average about 1 percent a year.

Compared with the method A estimate, this estimate of Army costs would reflect a smaller peace dividend. Although Army budgets to meet these costs would remain well below the peak level of the 1980s, when the budget approached \$100 billion, costs of \$63 billion in 2007 would exceed any budget since 1993, which paid for an Army that was significantly larger than that projected for 2007.

RESPONDING TO POTENTIAL BUDGETARY PRESSURES

This memorandum includes estimates of costs that are likely to be incurred by the Army on the basis of current Administration plans. If costs for proposed weapon systems exceed current estimates, the Congress might respond by increasing the Army's budget. Fiscal limitations may prevent any substantial increases, however, in which case the Congress will have to consider alternative policy responses to excessive demands on the Army's budget that seem likely under the Administration's plan. These responses might include:

- o Further reductions in the size of the Army, perhaps moving toward a "reconstitutable" Army that would be small in peacetime but would be capable of rebuilding if world tensions increased again; and
- o Cancellation of or delays in the Comanche helicopter program and other major procurement programs.

The latter approach may be attractive in view of the recent vintage and sophistication of many of the Army's major weapons. Additional purchases and upgrades of existing helicopters would be less expensive than development and purchase of the Comanche, which was designed to counter the sophisticated Soviet threat that no longer exists. Current Army helicopters, in conjunction with currently planned improvements, will be more than adequate to meet the threats posed by weapons of most of the likely

opponents during the next two decades. This same argument applies to many of the Army's major modernization efforts. In the absence of a likely military opponent with capabilities to match those of the former Soviet Union, there is no urgent need to equip the Army with weapons that are significantly better than the ones it now has. Thus, delaying some modernization programs in order to reduce annual Army costs might be a reasonable alternative to current Army plans.